

REMARKS

Claims 1-12 are presently pending. Reconsideration is respectfully requested.

Attention is directed to the papers initially filed by Applicant in this divisional application. In particular, it is believed that Applicant's initial filing included two pages of Form PTO-1449, which listed documents cited by Applicant or the USPTO in the parent application. However, the pending Office Action includes an initialed copy of only one of the aforementioned pages of Form PTO-1449. Accordingly, a copy of the missing page of Form PTO-1449 is attached. As previously indicated, because the list of documents were cited in the parent application, copies of these documents need not be submitted (see MPEP 609). Accordingly, consideration of the documents listed on attached Form PTO-1449 should now be in order, and it is respectfully requested that the next Office Action include an initialed copy of attached Form PTO-1449.

On the other hand, if the PTO believes that the attached Form PTO-1449 was not included with the original filing of this divisional application, then the PTO is authorized to charge the fee set forth in 37 C.F.R. 1.17(p) to Deposit Account No. 50-1752 and/or Deposit Account No. 10-0096.

Accordingly, consideration of the documents listed on attached Form PTO-1449 should now be in order, and the next Office Action should include an initialed copy of attached Form PTO-1449.

Turning now to the merits of the pending Office Action, Claims 1-12 stand rejected as anticipated by Lopes U.S. Patent No. 6,453,176. These rejections are traversed for the following exemplary reasons.

Claims 1-12 are drawn generally to managing the loading in a beam pattern associated with a multi-beam antenna apparatus. In particular, these claims recite that a third beam is selected for effectuating communication with a user, and that this selection is performed in response to an indication that the user is located in an area covered by a second beam that is adjacent to an overloaded first beam in the beam pattern. The above-described subject matter of Claims 1-12 has not been found to be taught by Lopes.

In particular, those portions of Lopes specifically cited in the pending Office Action have been carefully reviewed, and the above-described subject matter of Claims 1-12 has not been found in those portions of Lopes. More specifically, in Figure 6, and at lines 61-67 of column 10, Lopes teaches that the beams of two antenna arrays can be offset and overlapped with respect to each other. This is shown in Figure 6, where four directional beams (solid-line) from a first antenna array are overlapped by four directional beams (broken-line) from a second antenna array. Thus, this portion of Lopes discloses that adjacent beams in a multi-beam pattern can overlap one another.

At "lines 32+" of column 8, Lopes discusses three topics. First, lines 32-46 discuss how receivers at the base station can be used to collect measurements of the signal power in various beams. Second, lines 47-57 indicate that, if more

than one beam is used to support communication with a subscriber unit, then beams from both the solid-line and broken-line beam patterns of Lopes Figure 6 should be used. For example, one receiver in the base station can use the highest ranked beam from the solid-line pattern, and another receiver in the base station can use the highest ranked beam from the broken-line pattern, in order to provide both interferer reduction and diversity combining with respect to the subscriber unit. Third, lines 58-67 of Lopes column 8 teach that a discriminating criterion can be used to determine when the various subscriber units will use the best beams available to them. In particular, a subscriber unit with low path loss (i.e., a subscriber unit close to the base station) need not utilize the best downlink beam available to it, while a subscriber unit with higher path loss would utilize the best downlink beam available to it.

At lines 49-55 of column 10, Lopes addresses a situation wherein a wide beam antenna such as a sector or omnidirectional antenna is used in combination with a directional beam antenna. In particular, calls within an overloaded beam of the directional beam antenna are hopped through that beam (and/or adjacent beams) and the wide beam (sector) antenna, which means that the call will use the wide beam antenna in some time slots and the directional beam antenna in other time slots.

Lines 56-59 of Lopes column 10 disclose that, with the aforementioned type of wide beam antenna/directional beam antenna combination, if a particular beam is often overloaded and thus generates an undesirably large amount of

hopping to and from the sector antenna, then calls on such a frequently overloaded beam should be encouraged to be handed over to a neighboring base station.

Based on the foregoing description of the specifically cited portions of Lopes, Applicants cannot see how these portions of Lopes, considered individually or in any possible combination, can be construed to teach the above-described subject matter of Claims 1-12, namely, that a third beam is selected for effectuating communication with a user in response to an indication that the user is located in an area covered by a second beam that is adjacent to an overloaded first beam.

In fact, after careful review of Lopes, it is submitted that lines 9-14 of Lopes column 8 represent the most pertinent portion of Lopes with respect to the subject matter of Claims 1-12. This portion of Lopes discloses a first subscriber unit currently served by beam A, and also discloses that both beam A and beam B are capable of serving the first subscriber unit. If a second subscriber unit moves into the area served by beam A, then the first subscriber unit can be switched to beam B, thereby permitting beam A to serve the second subscriber unit. However, the above-described subject matter of Claims 1-12 clearly distinguishes patentably over this teaching of Lopes also.

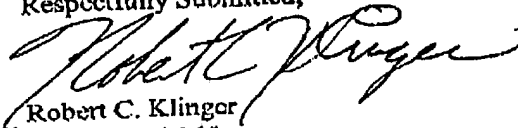
It is submitted in view of the foregoing discussion that Claims 1-12 patentably distinguish over Lopes, and withdrawal of the rejections of Claims 1-12 is therefore respectfully requested.

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Any inquiries regarding this paper may be directed to the undersigned
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Respectfully Submitted,


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Enclosure: Form PTO-1449